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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/620,015	07/14/2003	Eun-Sung Seo	9898-291	9260	
7590 12/29/2005 MARGER JOHNSON & McCOLLOM, P.C. 1030 S. W. Morrison Street Portland, OR 97205			EXAMINER		
			ни, ѕно	HU, SHOUXIANG	
			ART UNIT	PAPER NUMBER	
			2811		
			DATE MAILED: 12/29/2005		

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary Total MAILING DATE of this communication appears on the cover sheat with the correspondence address Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. If No period reply is specified sole, the maximum studies of this communication. If No period reply is specified sole, the maximum studies of the studies period will applied the or the specified reply is specified sole, the maining studie of this communication. If No period the set or set address period will applied the set of				<u> </u>				
Examiner Shouxiang Hu 2811 2811			Application No.	Applicant(s)				
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WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Elementor of time may be available under the provision of 30° FR1 1360°, his nevent, however, may a rayby be timely filled after SX (5) MONTHS from the mailing date of this communication; and it rapps and will expire SX (6) MONTHS from the mailing date of this communication. Failurs to received by the Office later than these months after the mailing date of this communication. Failurs to received by the Office later than these months after the mailing date of this communication, even if timely filled, may reduce any samed patent time adjustment. See 27 CFR 1.704(s). Status 1) □ Responsive to communication(s) filed on 10 March 2005. 2a) □ This action is FINAL. 2b) □ This action is non-final. 3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) □ Claim(s) 1-20 is/are pending in the application. 4) ○ Of the above claim(s) is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 4) □ Claim(s) is/are allowed. 6) □ Claim(s) is/are objected to. 8) □ Claim(s) is/are objected to. 8) □ Claim(s) is/are objected to. 8) □ Claim(s) is/are objected to by the Examiner. Application Papers 9) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicard may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.86(a). Replacement drawing sheet(s) including the corrections required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ □ Cartified copies of the priority documents have been received. 2 □			pears on the cover sheet with the c	correspondence address				
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DETAILED ACTION

Claim Objections

Claims 1-20 are objected to because of the following informalities and/or defects:

Claims 1, 5 and 10 each need to further clarify what exactly the terms of "which" refer to in the claims.

In claim 10, line 8, the term of "each include" should read as: --includes--.

Claim 15 needs to further clarify the direction of each of the fuse regions, given that a fuse region is normally a 2-D area that has at least two directions along its edges.

In claims 16 and 17, the term of "a predetermined" should read as: --by a predetermined--.

Claim 18 needs to further clarify the terms of: "the same direction", "one" and "perpendicular to the plurality of fuse regions" (see the above note for claim 15).

Claims 19 and 20 need to further clarify the relationship(s) between the first and second fuses and the fuse regions already recited in claim 18.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

⁽b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, 6 and 9, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 102(b) as being anticipated by Yoon (KR 2001-0029286 (Application No. 99-42035), June 2001; of record).

Yoon discloses a fuse bank (Figs. 2-4; also see US 6,448,626 for its English translation), comprising: first and second fuses (313 and 314), each having a fuse region (the corresponding section inside 323) in a first direction, a first connecting line region (including a corresponding upper edge portion in 323 and the corresponding portion in 321) bent along a second direction, and a second connecting line region (including a corresponding lower edge portion in 323 and the corresponding portion in 322) bent along a third direction.

Regarding claims 5, 6 and 9, it is noted that the first pair of fuses (311 and 312) and second pair of fuses (313 and 314) can be regarded as the first and second fuse groups, respectively; and/or, that the device of Yoon is for a fuse-based defect-correctable DRAM, which normally naturally includes a large amount of repeating basic fuse structures like the one shown in Figs. 2 and/or 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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Claims 3, 4, 7, 8 and 10-20, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon in view of AAPA (Applicant's Admitted Prior Art) and/or Sakuta (Sakuta et al., US 5,208,782).

The disclosure of Yoon is discussed as applied to claims 1, 2, 5, 6 and 9 above.

Although Yoon does not expressly disclose that the connecting lines can be bent so as to have a right angle to the fuse region's direction, and/or that neighboring fuse banks/groups can be symmetrical about the direction perpendicular to the fuse region's direction, one of ordinary skill in the art would readily recognize that any or all of the connecting lines can be formed perpendicular to the fuse region's direction for obtained a desirable interconnection/orientation layout and/or for reducing layout space, as evidenced in AAPA (see Fig. 2); and/or that such type of perpendicular-direction symmetrical layout is one of the most commonly used circuit layouts in the art for forming the commonly desirably mirror-image-type symmetrical circuit layout and/or for reducing circuit space, as evidenced in Sakuta (see the symmetric circuit layouts in Figs. 4-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the right-angle connecting lines of AAPA and/or the perpendicular-direction symmetrical circuit layout of Sakuta, so that a memory device with desired layout, and/or with reduced space, for the connecting lines and/or for the memory circuits therein.

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Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are most in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

December 19, 2005

SHOUXIANG HU PRIMARY EXAMINER